RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/771,395A

Source: 1FW/6

Date Processed by STIC: 2/8/07

ENTERED

IFW16

```
 3 <110> APPLICANT: BERGERON, Dominique
 4        DEHBI, Mohammed
 5        DUBOW, Michael
 6        GROS, Philippe
 7        MCCARTY, John
 8        PELLETIER, Jerry
10 <120> TITLE OF INVENTION: INHIBITORS OF STAPHYLOCOCCUS AUREUS PRIMARY SIGMA FACTOR AND
USES
11        THEREOF
13 <130> FILE REFERENCE: Q79408
15 <140> CURRENT APPLICATION NUMBER: 10/771,395A
16 <141> CURRENT FILING DATE: 2004-02-05
18 <150> PRIOR APPLICATION NUMBER: US 60/445,441
19 <151> PRIOR FILING DATE: 2003-02-07
21 <160> NUMBER OF SEQ ID NOS: 41
23 <170> SOFTWARE: PatentIn version 3.2
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 1107
27 <212> TYPE: DNA
28 <213> ORGANISM: Staphylococcus aureus
31 <220> FEATURE:
32 <221> NAME/KEY: CDS
33 <222> LOCATION: (1)..(1107)
35 <400> SEQUENCE: 1
36 atg tct gat aac aca gtt aaa att aaa aaa caa aca att gat ccg aca      48
37 Met Ser Asp Asn Thr Val Lys Ile Lys Lys Gln Thr Ile Asp Pro Thr
38 1               5                   10                  15
40 tta aca tta gaa gat gtt aag aag caa tta att gaa aaa ggt aaa aaa      96
41 Leu Thr Leu Glu Asp Val Lys Lys Gln Leu Ile Glu Lys Gly Lys Lys
42              20                  25                  30
44 gag ggt cat tta agt cat gaa gaa att gct gaa aaa ctt cag aat ttt     144
45 Glu Gly His Leu Ser His Glu Glu Ile Ala Glu Lys Leu Gln Asn Phe
46          35                  40                  45
48 gat atc gac tct gat caa atg gat gat ttc ttt gat caa tta aat gat     192
49 Asp Ile Asp Ser Asp Gln Met Asp Asp Phe Phe Asp Gln Leu Asn Asp
50      50                  55                  60
52 aat gat att tca cta gtt aat gaa aaa gat agt tca gat act gac gag     240
53 Asn Asp Ile Ser Leu Val Asn Glu Lys Asp Ser Ser Asp Thr Asp Glu
54 65                  70                  75                  80
56 aaa ctg aat cca agt gat ctt agt gcc cct cca ggt gtt aaa ata aat     288
57 Lys Leu Asn Pro Ser Asp Leu Ser Ala Pro Pro Gly Val Lys Ile Asn
58              85                  90                  95
60 gac cca gtt cgt atg tac ctt aaa gaa att ggg cgt gtt aac tta tta     336
61 Asp Pro Val Arg Met Tyr Leu Lys Glu Ile Gly Arg Val Asn Leu Leu
```

RAW SEQUENCE LISTING   DATE: 02/08/2007
PATENT APPLICATION: US/10/771,395A   TIME: 11:02:08

Input Set : A:\10-771,395 Sequence Listing.txt
Output Set: N:\CRF4\02082007\J771395A.raw

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62             100               105               110
64 agt gca caa gaa gaa atc gaa tta gcc aaa cgt att gaa caa ggt gat    384
65 Ser Ala Gln Glu Glu Ile Glu Leu Ala Lys Arg Ile Glu Gln Gly Asp
66        115               120               125
68 gaa gta gca aaa tca aga ctt gca gaa gcg aac tta cgt tta gtt gta    432
69 Glu Val Ala Lys Ser Arg Leu Ala Glu Ala Asn Leu Arg Leu Val Val
70    130               135               140
72 agt att gct aaa aga tac gta ggt cgt ggt atg tta ttc ctt gat tta    480
73 Ser Ile Ala Lys Arg Tyr Val Gly Arg Gly Met Leu Phe Leu Asp Leu
74 145               150               155               160
76 atc caa gaa ggt aat atg ggt ctt att aaa gct gtt gaa aaa ttt gac    528
77 Ile Gln Glu Gly Asn Met Gly Leu Ile Lys Ala Val Glu Lys Phe Asp
78        165               170               175
80 ttt aac aaa gga ttt aag ttt tca aca tat gca aca tgg tgg att aga    576
81 Phe Asn Lys Gly Phe Lys Phe Ser Thr Tyr Ala Thr Trp Trp Ile Arg
82        180               185               190
84 caa gca atc act cgt gca att gct gac caa gca cgt acg att cgt atc    624
85 Gln Ala Ile Thr Arg Ala Ile Ala Asp Gln Ala Arg Thr Ile Arg Ile
86        195               200               205
88 cct gtg cat atg gta gaa aca att aat aaa tta att cgt gtt caa cgt    672
89 Pro Val His Met Val Glu Thr Ile Asn Lys Leu Ile Arg Val Gln Arg
90    210               215               220
92 caa tta tta cag gac tta ggt cga gat cca gca cca gaa gaa att ggt    720
93 Gln Leu Leu Gln Asp Leu Gly Arg Asp Pro Ala Pro Glu Glu Ile Gly
94 225               230               235               240
96 gaa gaa atg gat tta cca gca gaa aaa gtt cgt gaa att tta aaa att    768
97 Glu Glu Met Asp Leu Pro Ala Glu Lys Val Arg Glu Ile Leu Lys Ile
98        245               250               255
100 gcg caa gaa cct gtt tca tta gaa aca cca att ggt gaa gaa gat gat   816
101 Ala Gln Glu Pro Val Ser Leu Glu Thr Pro Ile Gly Glu Glu Asp Asp
102        260               265               270
104 agt cat tta gga gac ttt att gag gat cag gaa gca caa agt cct tca   864
105 Ser His Leu Gly Asp Phe Ile Glu Asp Gln Glu Ala Gln Ser Pro Ser
106        275               280               285
108 gat cat gct gct tat gaa tta tta aaa gag caa tta gaa gat gtg ctt   912
109 Asp His Ala Ala Tyr Glu Leu Leu Lys Glu Gln Leu Glu Asp Val Leu
110    290               295               300
112 gat aca tta act gat aga gaa gaa aat gta tta cga tta aga ttt ggt   960
113 Asp Thr Leu Thr Asp Arg Glu Glu Asn Val Leu Arg Leu Arg Phe Gly
114 305               310               315               320
116 ctt gat gac ggc aga aca aga aca ctt gaa gaa gtt ggt aaa gtt ttc   1008
117 Leu Asp Asp Gly Arg Thr Arg Thr Leu Glu Glu Val Gly Lys Val Phe
118        325               330               335
120 ggt gtt aca cgt gaa cgt att cga caa att gaa gca aaa gca ctt aga   1056
121 Gly Val Thr Arg Glu Arg Ile Arg Gln Ile Glu Ala Lys Ala Leu Arg
122        340               345               350
124 aaa tta aga cat cca agt cgt agt aaa cgt ttg aaa gac ttt atg gat   1104
125 Lys Leu Arg His Pro Ser Arg Ser Lys Arg Leu Lys Asp Phe Met Asp
126        355               360               365
```

```
128 taa                                                          1107
131 <210> SEQ ID NO: 2
132 <211> LENGTH: 368
133 <212> TYPE: PRT
134 <213> ORGANISM: Staphylococcus aureus
136 <400> SEQUENCE: 2
138 Met Ser Asp Asn Thr Val Lys Ile Lys Lys Gln Thr Ile Asp Pro Thr
139 1               5                  10                  15
142 Leu Thr Leu Glu Asp Val Lys Lys Gln Leu Ile Glu Lys Gly Lys Lys
143             20                  25                  30
146 Glu Gly His Leu Ser His Glu Glu Ile Ala Glu Lys Leu Gln Asn Phe
147         35                  40                  45
150 Asp Ile Asp Ser Asp Gln Met Asp Asp Phe Phe Asp Gln Leu Asn Asp
151     50                  55                  60
154 Asn Asp Ile Ser Leu Val Asn Glu Lys Asp Ser Ser Asp Thr Asp Glu
155 65                  70                  75                  80
158 Lys Leu Asn Pro Ser Asp Leu Ser Ala Pro Pro Gly Val Lys Ile Asn
159                 85                  90                  95
162 Asp Pro Val Arg Met Tyr Leu Lys Glu Ile Gly Arg Val Asn Leu Leu
163             100                 105                 110
166 Ser Ala Gln Glu Glu Ile Glu Leu Ala Lys Arg Ile Glu Gln Gly Asp
167         115                 120                 125
170 Glu Val Ala Lys Ser Arg Leu Ala Glu Ala Asn Leu Arg Leu Val Val
171     130                 135                 140
174 Ser Ile Ala Lys Arg Tyr Val Gly Arg Gly Met Leu Phe Leu Asp Leu
175 145                 150                 155                 160
178 Ile Gln Glu Gly Asn Met Gly Leu Ile Lys Ala Val Glu Lys Phe Asp
179                 165                 170                 175
182 Phe Asn Lys Gly Phe Lys Phe Ser Thr Tyr Ala Thr Trp Trp Ile Arg
183             180                 185                 190
186 Gln Ala Ile Thr Arg Ala Ile Ala Asp Gln Ala Arg Thr Ile Arg Ile
187         195                 200                 205
190 Pro Val His Met Val Glu Thr Ile Asn Lys Leu Ile Arg Val Gln Arg
191     210                 215                 220
194 Gln Leu Leu Gln Asp Leu Gly Arg Asp Pro Ala Pro Glu Glu Ile Gly
195 225                 230                 235                 240
198 Glu Glu Met Asp Leu Pro Ala Glu Lys Val Arg Glu Ile Leu Lys Ile
199                 245                 250                 255
202 Ala Gln Glu Pro Val Ser Leu Glu Thr Pro Ile Gly Glu Glu Asp Asp
203             260                 265                 270
206 Ser His Leu Gly Asp Phe Ile Glu Asp Gln Glu Ala Gln Ser Pro Ser
207         275                 280                 285
210 Asp His Ala Ala Tyr Glu Leu Leu Lys Glu Gln Leu Glu Asp Val Leu
211     290                 295                 300
214 Asp Thr Leu Thr Asp Arg Glu Glu Asn Val Leu Arg Leu Arg Phe Gly
215 305                 310                 315                 320
218 Leu Asp Asp Gly Arg Thr Arg Thr Leu Glu Glu Val Gly Lys Val Phe
219             325                 330                 335
222 Gly Val Thr Arg Glu Arg Ile Arg Gln Ile Glu Ala Lys Ala Leu Arg
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RAW SEQUENCE LISTING   DATE: 02/08/2007
PATENT APPLICATION: US/10/771,395A   TIME: 11:02:08

Input Set : A:\10-771,395 Sequence Listing.txt
Output Set: N:\CRF4\02082007\J771395A.raw

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223          340            345            350
226 Lys Leu Arg His Pro Ser Arg Ser Lys Arg Leu Lys Asp Phe Met Asp
227          355            360            365
230 <210> SEQ ID NO: 3
231 <211> LENGTH: 242
232 <212> TYPE: PRT
233 <213> ORGANISM: Staphylococcus aureus
235 <400> SEQUENCE: 3
237 Gly Asp Glu Val Ala Lys Ser Arg Leu Ala Glu Ala Asn Leu Arg Leu
238 1            5            10             15
241 Val Val Ser Ile Ala Lys Arg Tyr Val Gly Arg Gly Met Leu Phe Leu
242          20             25             30
245 Asp Leu Ile Gln Glu Gly Asn Met Gly Leu Ile Lys Ala Val Glu Lys
246          35             40             45
249 Phe Asp Phe Asn Lys Gly Phe Lys Phe Ser Thr Tyr Ala Thr Trp Trp
250      50             55             60
253 Ile Arg Gln Ala Ile Thr Arg Ala Ile Ala Asp Gln Ala Arg Thr Ile
254 65           70             75             80
257 Arg Ile Pro Val His Met Val Glu Thr Ile Asn Lys Leu Ile Arg Val
258          85             90             95
261 Gln Arg Gln Leu Leu Gln Asp Leu Gly Arg Asp Pro Ala Pro Glu Glu
262          100            105            110
265 Ile Gly Glu Glu Met Asp Leu Pro Ala Glu Lys Val Arg Glu Ile Leu
266          115            120            125
269 Lys Ile Ala Gln Glu Pro Val Ser Leu Glu Thr Pro Ile Gly Glu Glu
270      130            135            140
273 Asp Asp Ser His Leu Gly Asp Phe Ile Glu Asp Gln Glu Ala Gln Ser
274 145          150            155            160
277 Pro Ser Asp His Ala Ala Tyr Glu Leu Leu Lys Glu Gln Leu Glu Asp
278          165            170            175
281 Val Leu Asp Thr Leu Thr Asp Arg Glu Glu Asn Val Leu Arg Leu Arg
282          180            185            190
285 Phe Gly Leu Asp Asp Gly Arg Thr Arg Thr Leu Glu Glu Val Gly Lys
286      195            200            205
289 Val Phe Gly Val Thr Arg Glu Arg Ile Arg Gln Ile Glu Ala Lys Ala
290      210            215            220
293 Leu Arg Lys Leu Arg His Pro Ser Arg Ser Lys Arg Leu Lys Asp Phe
294 225          230            235            240
297 Met Asp
301 <210> SEQ ID NO: 4
302 <211> LENGTH: 75
303 <212> TYPE: PRT
304 <213> ORGANISM: Staphylococcus aureus
306 <400> SEQUENCE: 4
308 Glu Leu Leu Lys Glu Gln Leu Glu Asp Val Leu Asp Thr Leu Thr Asp
309 1            5            10             15
312 Arg Glu Glu Asn Val Leu Arg Leu Arg Phe Gly Leu Asp Asp Gly Arg
313          20             25             30
316 Thr Arg Thr Leu Glu Glu Val Gly Lys Val Phe Gly Val Thr Arg Glu
```

```
317          35                    40                    45
320 Arg Ile Arg Gln Ile Glu Ala Lys Ala Leu Arg Lys Leu Arg His Pro
321      50                    55                    60
324 Ser Arg Ser Lys Arg Leu Lys Asp Phe Met Asp
325 65                    70                    75
328 <210> SEQ ID NO: 5
329 <211> LENGTH: 67
330 <212> TYPE: PRT
331 <213> ORGANISM: Staphylococcus aureus
333 <400> SEQUENCE: 5
335 Glu Leu Leu Lys Glu Gln Leu Glu Asp Val Leu Asp Thr Leu Thr Asp
336 1                    5                    10                    15
339 Arg Glu Glu Asn Val Leu Arg Leu Arg Phe Gly Leu Asp Asp Gly Arg
340           20                    25                    30
343 Thr Arg Thr Leu Glu Glu Val Gly Lys Val Phe Gly Val Thr Arg Glu
344          35                    40                    45
347 Arg Ile Arg Gln Ile Glu Ala Lys Ala Leu Arg Lys Leu Arg His Pro
348      50                    55                    60
351 Ser Arg Ser
352 65
355 <210> SEQ ID NO: 6
356 <211> LENGTH: 597
357 <212> TYPE: DNA
358 <213> ORGANISM: Bacteriophage G1
361 <220> FEATURE:
362 <221> NAME/KEY: CDS
363 <222> LOCATION: (1)..(597)
365 <400> SEQUENCE: 6
366 atg aaa tta aag att tta gat aaa gat aat gca aca ctt aat gtg ttt      48
367 Met Lys Leu Lys Ile Leu Asp Lys Asp Asn Ala Thr Leu Asn Val Phe
368 1                    5                    10                    15
370 cat cgt aat aag gag cac aaa aca ata gat aat gta cca act gct aac      96
371 His Arg Asn Lys Glu His Lys Thr Ile Asp Asn Val Pro Thr Ala Asn
372           20                    25                    30
374 tta gtt gat tgg tac cct cta agt aat gct tat gag tac aag tta agt     144
375 Leu Val Asp Trp Tyr Pro Leu Ser Asn Ala Tyr Glu Tyr Lys Leu Ser
376          35                    40                    45
378 aga aac ggg gaa tac tta gaa tta aaa aga tta cgt tct act tta cct     192
379 Arg Asn Gly Glu Tyr Leu Glu Leu Lys Arg Leu Arg Ser Thr Leu Pro
380      50                    55                    60
382 tca tct tat ggt tta gat gat aat aac caa gat att att aga gat aat     240
383 Ser Ser Tyr Gly Leu Asp Asp Asn Asn Gln Asp Ile Ile Arg Asp Asn
384 65                    70                    75                    80
386 aac cat aga tgt aaa ata ggt tat tgg tac aac cct gca gta cgc aaa     288
387 Asn His Arg Cys Lys Ile Gly Tyr Trp Tyr Asn Pro Ala Val Arg Lys
388                    85                    90                    95
390 gat aat tta aag att ata gag aaa gct aaa caa tat gga tta cct att     336
391 Asp Asn Leu Lys Ile Ile Glu Lys Ala Lys Gln Tyr Gly Leu Pro Ile
392          100                   105                   110
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 02/08/2007
PATENT APPLICATION: US/10/771,395A   TIME: 11:02:09

Input Set : **A:\10-771,395 Sequence Listing.txt**
Output Set: **N:\CRF4\02082007\J771395A.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:11; N Pos.  6,12,16,17,19,25,27,31,32,34,35,36,40,41,46,48,49,50,51,53
Seq#:11; N Pos.  54,55,56,57,60,62,66,68,69,70,71,72,73,75,81,82,83,84,85,86
Seq#:11; N Pos.  91,94,95,99,105,109,111,112,113,117,124,125,126,134,135,137
Seq#:11; N Pos.  139,140,144,145,146,147,148,151,153,158,166,169,177,178,180
Seq#:11; N Pos.  181,186,187,188,198,199,201,204,205,206,207,208,209,210,211
Seq#:11; N Pos.  212,213,214,219,220,221,223,224,225,227,234,235,236,243,245
Seq#:11; N Pos.  248,249,250,251,252,256,257,258,263,265,271,272,273,274,276
Seq#:11; N Pos.  277,278,286,288,294,295,297,307,308,315,322,327,334,336,340
Seq#:11; N Pos.  341,342,343,344,346,348,349,350,354,357,358,360,363,367,368
Seq#:11; N Pos.  370,372,373,375,376,377,378,384,387,388,389,390,391,392,393
Seq#:11; N Pos.  394,396,400,403,405,406,409,413,415,417,420,421,426,428,433
Seq#:11; N Pos.  434,435,437,438,439,440,441,442,443,444,445,447,448,449,450
Seq#:11; N Pos.  452,453,459,461,462,463,465,466,467,468,469,470,474,475,477
Seq#:11; N Pos.  481,482,483,484,487,488,492,493,495,496,501,502,503,508,509
Seq#:11; N Pos.  510,511,512,514,516,517,520,521,522,525,529,530,534,535,540
Seq#:11; N Pos.  546,552,558,562,570,574,576,582,585
Seq#:12; Xaa Pos.  6,7,9,10,11,12,14,16,18,19,20,21,23,24,25,28,29,31,32,33
Seq#:12; Xaa Pos.  37,42,45,46,47,48,49,50,51,53,60,63,67,68,69,70,71,72,73
Seq#:12; Xaa Pos.  74,76,77,78,79,81,82,83,84,86,88,89,91,92,93,96,99,103
Seq#:12; Xaa Pos.  108,112,114,115,116,117,119,120,123,124,125,126,130,131
Seq#:12; Xaa Pos.  134,135,136,137,138,143,145,146,147,148,149,150,151,153
Seq#:12; Xaa Pos.  154,155,156,157,159,161,162,163,165,166,167,168,170,171
Seq#:12; Xaa Pos.  172,173,174,177,178,182,184,192
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VERIFICATION SUMMARY   DATE: 02/08/2007
PATENT APPLICATION: US/10/771,395A   TIME: 11:02:09

Input Set : **A:\10-771,395 Sequence Listing.txt**
Output Set: **N:\CRF4\02082007\J771395A.raw**

```
L:1248 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
L:1250 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:60
L:1252 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:120
L:1254 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:180
L:1256 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:240
L:1258 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:300
L:1260 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:360
L:1262 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:420
L:1264 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:480
L:1266 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:540
L:1600 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:1604 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:16
L:1608 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:32
L:1612 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:48
L:1616 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:64
L:1620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:80
L:1624 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:96
L:1628 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:112
L:1632 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:128
L:1636 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:144
L:1640 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:160
L:1644 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:176
```